PROCEEDINGS OF THE
ROYAL ENTOMOLOGICAL SOCIETY
OF LONDON

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ANNUAL MEETING

WEDNESDAY, 19TH JANUARY, 1949, at 5.30 p.m.

AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 1st December, 1948, and of the Joint Meeting with the Linnean Society held on 9th December, 1948.
2. Recommendations of candidates for Fellowship.
3. Announcement of election of new Fellows.
4. Announcement of election of Officers and Council for 1949.
5. Additions to the Library.

Presented.

Malayan Nature Society. *Malayan Nature Journal.* Vol. 1, 1940. 8vo. Kuala Lumpur. [Mr. Collenette.]

Newman, L. H. *Butterfly haunts.* 8vo. London. 1948. [The Author.]

Hughes, A. M. *The mites associated with stored food products.* 8vo. London. 1948. [Ministry of Agriculture and Fisheries.]

Manley, R. O. B. *Bee-keeping in Britain.* 8vo. London. 1948. [The Publishers.]

Snyder, T. E. *Our enemy the termite.* Revised edition. 8vo. Ithaca, N.Y. 1948. [The Publishers.]

In addition separates have been presented by Dr. P. M. Butler, the Anti-Locust Research Centre, Dr. T. T. Macan, Capt. T. Dannreuther, R.N., Mr. E. F. Gilmour, the Tsetse Fly and Trypanosomiasis Committee, the U.S. Department of Agriculture, the Smithsonian Institution, Miss C. Longfield, the British Museum (Natural History), the East African Tsetse Research Centre, the Companhia de Diamentes de Angola, Dr. Malcolm Cameron, Dr. V. B. Wigglesworth, Prof. F. Silvestri, Mr. E. R. Speyer and Mr. R. R. U. Kaufmann.

6. Admission of Fellows.
7. Council's Report.
8. Treasurer's Report and Balance Sheet.
9. The President's Address.
10. Vote of thanks to the Officers.

TEA will be served in the Library before the meeting.

A card index of Fellows' addresses arranged **on a geographical basis** is now available for the use of Fellows in the Society's Rooms. Addresses in Great Britain are grouped under counties: elsewhere under Dominions, Colonies, Foreign States, etc.

ADMISSION OF FELLOWS

Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-laws and attends the meeting on 19th January, 1949, is requested to inform the Secretary before 5.15 p.m. on that date.

Proceedings of the Ordinary Meeting held on 1st December, 1948.

Dr. C. B. Williams, M.A., President, in the Chair.

Present, 58 Fellows and 8 Visitors.

The minutes of the Ordinary Meeting held on 3rd November, 1948, were confirmed, and signed by the President.

The names of the following candidates for election were read: For the first time: M. M. Bailey, G. A. Brett, B.Sc., A.R.C.S., D.I.C., Miss D. M. Evans, R. C. B. Hartland-Rowe, L. N. Kidd, J. A. MacArthur, E. J. Popham, D.Sc., Ph.D., A.R.C.S., F. S. Tivey, and G. H. Youden.

For the second time: R. G. Davies, Mahumed Hussein Bey, Mrs. J. Kenten, C. C. V. Meeser, G. Popov, Chao-Seng Tsi, D. Smith, and E. F. Whiteside.

The Secretary read the names of the following newly elected Fellows of the Society: H. S. Atkinson, F.Z.S., Rydal, Oakhill Avenue, Pinner, Middx.; A. E. Gardner, 55, Northcroft Road, W. Ewell, Surrey; R. S. Hanoman, B.Sc., M.B., B.C.L., B.A.O., D.C.H., D.I.C., 6, Kirkway, Blackley, Manchester, 9; Captain D. Leatherdale, F.R.G.S., Vine Cottage, Old Woodstock, Oxon; Dr. C. R. Palmer, 519, London Road, Thornton Heath, Surrey; H. R. Pearson, Caixa Postal 5151, Rio de Janeiro, Brazil; C. Teesdale, B.Sc., Medical Research Laboratory, Nairobi, Kenya; Miss J. B. Walker, B.Sc., "Legetet," Muhoroni, Kenya Colony.

Thanks were voted to donors of gifts to the Library since the last meeting.

The Secretary read for the second time the nominations for Officers and Council for 1949.

The President announced that in accordance with custom a telegram of congratulation had been addressed to Their Majesties on the birth of the Royal Prince, and had been duly acknowledged.

The death of Sir John Fryer, K.B.E., M.A. (elected 1907, President 1938–39), and of A. W. Richardson (elected 1920) was announced.

The following papers, accepted for publication in the *Transactions*, were read in title:

"Observations on the larvae of *Ephestia elutella* during diapause Hübner (Lep., Phycitidae)," by N. Waloff.

"The Zygoptera of Mauritius (Odonata)," by F. C. Fraser.

Dr. J. Carayon signed the Obligation Book and was admitted a Fellow of the Society.

Dr. Williams mentioned that Council had under consideration altering the time of General Meetings from 5.30 p.m. to 5.0 p.m. and invited expressions of opinion from the meeting.

Dr. F. I. van Emden exhibited a small Agromyzid fly, *Liriomyza congesta* Becker, which he had received from Mr. R. D. Eady of the Natural History Museum and which was new to the British List. He said that in the summer of 1947 Mr. Collenette had collected a sawfly larva on *Lathyrus palustris* at Wicken, Cambs., and, as the plant was rare, he had given the larva to the hymenopterists at the Museum for rearing the adult. Later, on removing the dead leaves, Mr. Eady noticed two small dipterous larvae, which pupated almost immediately. Somewhat later a Dacnusine parasite and the present fly emerged. The latter proved to be *Liriomyza congesta* Becker (= *leguminosarum* Meijere), a well-known leafminer in many leguminous plants belonging to at least a dozen different genera. The known geographical distribution also was very extended, ranging over the whole of Europe, the Mediterranean area, Asia and North America.

He said that there was thus nothing surprising in the discovery of this species in Britain, and it had actually been found here before, for Mr. J. E. Collin had a pair bred from "vetch" in August, 1933, by Mr. A. H. Hamm. The larvae occurred in Mr. Hamm's own garden at Oxford. It was, however, interesting to note that the species had not been recorded before, and he therefore took this opportunity of drawing attention to the fact that extremely little is known about British AGROMYZIDAE in general. Of the genus now mentioned Kloet and Hincks were able to list no more than six species as British, and yet at least three times this number must be expected to occur in Britain.

Dr. O. W. Richards said that Hamm's list of AGROMYZIDAE of Oxfordshire in the Victoria County History included many species not mentioned by Kloet and Hincks.

Professor G. D. Hale Carpenter exhibited three new *Euploea* from Rennell Island, and discussed the anomaly in geographical distribution which they suggested. He said that the *Euploea* butterflies of Rennell Island showed striking differences from those of the rest of the Solomon Isles, which were well known. The Templeton-Crocker expedition from U.S.A. in 1933 made the only known collection from Rennell Island, which he had been able to study through the kindness of Dr. E. S. Ross of the Department of Entomology, California Academy of Sciences. Thirty-two specimens were taken: twenty-six (A) were a completely unknown subspecies of the *core* complex, five (B) a new form of the *batesii* complex, and the remaining specimen (C) was a most interesting new form of the *leucostictos* complex.

(A) was predominant, and the occurrence with it of (B) with similar appearance suggested that (C) had been produced as a Müllerian associate from the normal widely different forms in New Guinea, Bismarck Archipelago, Bougainville, and the other Solomon Isles. The species complex *core*, widely spread in Malaysia and New Guinea, had no form in the Solomons at all resembling (A). The new form, (B), of the *batesii* complex had its nearest affinity in forms inhabiting New Guinea and some of the islands at its eastern tip. The form (C) of *leucostictos* had no counterpart anywhere.

The normal fauna of the Solomons was not found on Rennell Island, which apparently did not receive its *Euploea* by the usual route from New Guinea *via* Bismarck Archipelago.

The chart showed a chasm of 5,000 metres depth separating Rennell Island from San Cristobal, the large eastern member of the Solomons, lying within the 4,000 metres sounding, but a tongue of only 2,000 metres depth, embracing the Louisiade archipelago, stretched eastwards from the tip of New Guinea towards Rennell Island. This may have been the route by which *Euploea* reached that island.

Mr. H. Oldroyd exhibited specimens of *Wandolleckia biformis* Schmitz, a wingless Phorid (Diptera) living in the mantle-cavity of the African Giant Forest Snail, *Achatina rugosa* Putz. They were sent from Entebbe, Uganda, by Dr. W. H. R. Lumsden. The specimens were all females; there was a stenogastric form, and it was believed that the adult began life as this form and became physogastric during adult life. The abdomen was almost entirely occupied by about twenty large eggs.

A similar development occurred in the genus *Termitoxenia*, formerly placed in the PHORIDAE, but now regarded as a separate family. In this genus the entire development appeared to take place inside the chorion of the egg, from which the adult finally emerged. No males of *Termitoxenia* were known, and it had been suggested that the flies were hermaphrodite, but he thought this was probably not so.

The male of *Wandolleckia* was not definitely known, but a single male had been taken along with females. If this was correctly associated it was a typical winged Phorid, near the genus *Aphiochaeta.*

The similarity between *Wandolleckia* and *Termitoxenia* appeared to be due to convergence. *Wandolleckia* had the typical head-structure of a Phorid, while *Termitoxenia* had a highly modified head, and a peculiar abdomen, in which the posterior segments had moved into a ventral position.

He exhibited figures showing the entire absence of wings and halteres; the long legs associated with its cursorial habits; the reduced eyes, and well-developed antennae, adapted for living in the dark space of the mantle-cavity of the snail. The abdomen was membranous, except for tiny dorsal plates, possibly enclosing sense-organs, on the second and fifth segments. He drew attention to the eye facets, which were reduced to about 23, and which were circular, not hexagonal in shape; the greatly extended arista of the antenna; the palpi, which appeared to be two-segmented; and the proboscis, which had large labella and prestomal teeth.

The flies were to be seen running about over the foot of the snail, and in and out of the mantle-cavity. Their food was not known; they have been said to feed on the slime of the snail, but the proboscis suggested that they might take some solid food, perhaps anything trapped in the slime.

Mr. R. G. Fennah remarked that this observation reminded him of a paper by J. G. Myers on a Phorid fly attacking millipedes (1934, *Proc. R. ent. Soc. Lond.* **9** : 62–63).

Dr. O. W. Richards discussed the habitat of the Chalk Hill Blue Butterfly and said that on two occasions in recent years a male of this butterfly had been caught in heathy country many miles from chalk or limestone.

Professor Carpenter, Col. W. B. L. Manley, Col. C. W. Mackworth-Praed, Mr. E. W. Classey, and Capt. R. A. Jackson reported from their own observation similar instances of this butterfly occurring in unexpected localities, the wandering specimens being almost always males.

The President exhibited two cases each showing the Macrolepidoptera caught in a light trap at Harpenden in a single night. On the night of 23rd July, 1946, 219 individuals were captured belonging to 43 species, and on the night of 9th August, 1946, 242 individuals belonging to 66 species. On the last night there was almost continuous rain, and one inch of rain fell between 6 p.m. and the following morning.

In reply to various questions regarding the light trap Dr. Williams said there was no evidence that the number of insects occurring in the area where it was used was adversely affected, although he did not recommend its use in a specialized ecological region. He said also that all species were not attracted to the same degree, but for statistical purposes it was as reliable as any other method of collecting.

Dr. Williams also exhibited a melanic specimen of *Triphaena comes* taken in the Harpenden light trap, such specimens being at present almost unknown in this country.

Mr. Miles C. Williams exhibited a male of the Lithosiid moth *Utetheisa ornatrix* L., an American species which he had taken alive on the island of Skokholm in July, 1948.

Dr. J. W. Evans played a gramophone record of the " songs " of some small Homoptera. These comprised four species of Jassids and two species of Cercopids, the former being all males and the latter females. The record had been made by Dr. F. Ossiannilsson of Stockholm. The sound, as in the case of Cicadas, was produced by tymbals, which were part of the tergite of the first abdominal segment.

Mr. R. L. E. Ford exhibited paintings of larvae of *Minucia lunaris* Schiffermüller showing the position of the " eye " marks when the larva was feeding and when the aggressive attitude was adopted. He also showed enlarged photographs, from life, of the same type of markings on larvae of *Papilio rutulus*, showing " eyes " as viewed by birds.

Mr. G. J. Kerrich exhibited two polyembryonic Chalcids of the family ENCYRTIDAE : (1) *Litomastix ? aestivalis* Mercet, a parasite of *Hadena polyodon* L. (Dark Arches moth), taken at Byfleet, Surrey, by H. T. Pagden. There was a female series already in the British Museum to which this series would be a useful addition.

(2) *L. tortricis* Waterston, a parasite of *Psammotis crocealis* Hübner (PYRALIDAE) taken at Gatley, Cheshire, by H. N. Michaelis, and received through Mr. H. Britten, who had determined it as a species of *Litomastix*. The second record was interesting, as it provided some confirmation of his opinion that *tortricis* Waterston should have been described in *Litomastix* and not in *Copidosoma*. He pointed out that this record was of an alternative host for a parasite of a species of economic importance. He added that the phenomenon of polyembryony occurred also in certain other parasitic Hymenoptera, e.g. *Macrocentrus* (BRACONIDAE).

Dr. A. H. Easton exhibited specimens of *Mecinus janthinus* Germar (CURCULLIONIDAE) from Darenth, Kent, and *Lagria atripes* Mulsant and Guillebeau (LAGRIIDAE) from Blean Woods, Kent, both new to the British list.

Dr. V. B. Wigglesworth exhibited the eggs and living newly-hatched nymphs of a giant Phasmid (identified by Professor Hale Carpenter as *Palophus*) which had been sent to him by Dr. E. Burtt from Tanganyika. The eggs were received early in the summer, were kept at 25° C., and hatched during October and November. The only acceptable food so far discovered was hawthorn ; *Pyracantha* was accepted but not eaten in quantity.

Mr. J. F. Burton exhibited a specimen of *Brephos parthenias* showing albinism due to a malformation of the yellow scales on the hind wing.

The Secretary, on behalf of Dr. A. M. Massee, exhibited specimens of *Bathysolen nubilus* L. taken in numbers this year in a chalk pit near Darenth, Kent. He mentioned that this species had hitherto only been taken in this country in 1902 at King's Lynn and Norwich, at Purfleet, Essex, in 1943, and at Aylesford, Kent, in 1945.

N. D. RILEY, *Honorary Secretary.*

PROCEEDINGS OF THE JOINT MEETING WITH THE LINNEAN SOCIETY HELD AT BURLINGTON HOUSE ON 9TH DECEMBER, 1948.

Present, 60 Fellows and 65 Fellows of the Linnean Society.

Professor G. R. de Beer,F. R.S., President of the Linnean Society, in the Chair.

The meeting was devoted exclusively to a discussion on the bearing of the parasite-host relationship on taxonomy.

Dr. J. Ramsbottom discussed the parasite host combination in plants in relation to taxonomy on behalf of the Linnean Society, and Dr. O. W. Richards and Mr. G. H. E. Hopkins, O.B.E., spoke on the insect relation. Abstracts of their remarks appeared on pages 44–45.

The following speakers took part in the subsequent discussion: Dr. S. C, Harland, F.R.S., Mr. A. J. Wilmott, Dr. W. B. Turrill, Dr. E. M. Delf, Dr. R. Melville, Dr. C. B. Williams, Dr. W. H. Thorpe, and Dr. H. E. Hinton. Mr. Hopkins, Dr. Richards and Dr. Ramsbottom replied to questions.

The President, on behalf of the Council and Fellows, extended the Society's thanks to the Linnean Society for their hospitality on this occasion, and for the opportunity it afforded of discussing a subject of interest to both botanists and entomologists.

N. D. RILEY, *Honorary Secretary.*

The next meeting will be held on 2nd February, 1949.

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